

coating is provided on the perigraft, as opposed to luminal, surface of the stent cover and adds about 5%, or less, to the original thickness of the material used as the stent cover portion.

40. (Previously presented) A method according to claim 39 wherein the bioactive agent used to coat the surface is itself photoderivatized.

41. (Previously presented) A method according to claim 31 wherein the agent is immobilized in an amount between about $0.05 \mu\text{g}/\text{cm}^2$ to about $10 \mu\text{g}/\text{cm}^2$.

42. (Previously presented) A method according to claim 31 wherein the endovascular graft is provided in the form of a collapsed small diameter tube of on the order of two mm or less overall diameter, and can be expanded to form a larger diameter tube *in situ* of between about six mm and about thirty mm.

43. (Previously presented) A method according to claim 39 wherein the bioactive agent used to coat the surface is itself photoderivatized, and is immobilized in an amount between about $0.05 \mu\text{g}/\text{cm}^2$ to about $10 \mu\text{g}/\text{cm}^2$, and wherein the endovascular graft is provided in the form of a collapsed small diameter tube of on the order of two mm or less overall diameter, and can be expanded to form a larger diameter tube *in situ* of between about six mm and about thirty mm.

REMARKS

In the most recent Office Action, the Examiner rejected claims 1, 3, 6-7, 10-11, 13, 16-17, and 21-43 under 35 USC § 103(a) as being unpatentable over Guire (4,979,959) in view of Marin et al. (5,433,477). The Examiner contends that Guire discloses a vascular graft with a thrombogenic agent covalently bonded to its surface. The Examiner further contends that Marin

et al. teaches the use of a vascular graft as part of stent-graft and that the combination of these teachings would have been obvious to one skilled in the art.

The rejection under 35 USC § 103(a) is respectfully traversed. Guire does not disclose a graft coated with a thrombogenic agent, such as thrombogenic collagen.

As is known to those skilled in the art, there are multiple types of collagen and each have unique structures, function, and properties. For example, it is well known that collagen Types I and III have thrombogenic properties while Type IV is nonthrombogenic. It is also well known to those skilled in the art that Type I collagen must be chemically modified to render it non-thrombogenic. Therefore, it follows that any reference to nonthrombogenic collagen refers to at least modified Type I and/or Type IV. Conversely, reference to thrombogenic collagen means at least Types I and III and/or any other Type (including natural and modified) with thrombogenic properties.

Guire discloses a biocompatible coating for solid surfaces that can be used on a number of biomaterial articles, including, but not limited to, vascular grafts. Guire describes at Column 1, lines 17-22, that thrombosis is a major impediment to the use of vascular grafts. Guire further describes that grafts ideally should not induce blood clotting (Column 1, lines 33-36). Finally, in the Example relating to vascular grafts (i.e., Example 1 starting at Column 7, line 13), nonthrombogenic collagen Type IV (Column 8, lines 29-30) and fibronectin (a nonthrombogenic agent) are used. At column 11, lines 34-37, Guire describes that the fibronectin coated grafts were free of thrombosis. Therefore, coating a vascular graft with a thrombogenic agent, such as thrombogenic collagen, is the opposite of what one skilled in the art having access to Guire and Marin would have done.

It is noted that even though Guire makes mention of thrombogenic collagen at column 4, line 39, the reference still teaches away from the concept of coating a vascular graft with a thrombogenic agent such as collagen. Based on the numerous references to the undesirability of thrombosis at a vascular graft surface, it is only rational to conclude that Guire suggests the use of thrombogenic collagen for devices *other* than vascular grafts.

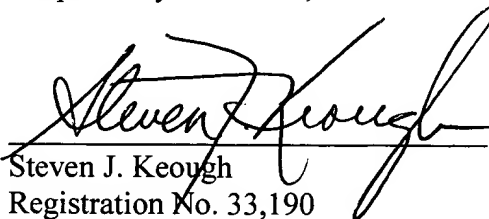
The pending claims are limited to a stent graft wherein the graft has a hemostatic bioactive agent. Guire does not teach a graft with a hemostatic agent. Applicant respectfully submits that claims 1, 3, 6-7, 10-11, 13, 16-17, and 21-43 are allowable over the cited art for at least the reasons outlined above.

In light of the above, the Applicant respectfully submits that each of claims 1, 3, 6-7, 10-11, 13, 16-17, and 21-43 is in condition for allowance. Because these are the only claims pending in the application, prompt issuance of a Notice of Allowance in this case is courteously solicited.

If the Examiner feels that prosecution of the present application can be materially advanced by a telephonic interview, the undersigned would welcome a call at the number listed below.

Respectfully submitted,

Dated: 5/26/06


Steven J. Keough
Registration No. 33,190

Application No. 09/519,246

Customer No. 55504
SurModics, Inc.
9924 West 74th Street
Eden Prairie, MN 55344
Telephone: (952) 345-3549
Facsimile: (952) 345-3560